

IN THE CLAIMS

Please cancel claims 1-33 without prejudice. Please enter new claims 1-22 below.

1. (New) A method for selecting a route in a network, the method comprising:
 - receiving data associated with a request for content at a first intermediate server, the data transmitted from an end user to the first intermediate server;
 - identifying a first cost of transmission along a default route from the first intermediate server to a content server, the default route determined using one or more existing routing mechanisms;
 - identifying a second cost of transmission along an alternate route from the first intermediate server to the content server, the alternate route including a second intermediate server not in the default route, wherein the second intermediate server is part of an overlay network;
 - determining an optimal route based at least in part on the first cost and the second cost, wherein the first cost and the second cost are determined using network communication performance metrics; and

transmitting data associated with the request for content along the optimal route.
2. (New) The method of claim 1, wherein network communication performance metrics are obtained periodically.
3. (New) The method of claim 2, wherein the cost of transmission is determined using one or more network communication performance metrics selected from the following group: delay, bandwidth, jitter, loss, security.
4. (New) The method of claim 1, wherein the alternate route comprises one or more overlay nodes.
5. (New) The method of claim 4, wherein the one or more overlay nodes define a virtual topology.
6. (New) The method of claim 5, wherein data is transmitted along the optimal route using encapsulation.
7. (New) The method of claim 6, wherein data is transmitted along the optimal route by changing a destination associated with the data.
8. (New) The method of claim 6, wherein a response corresponding to the request for content is also transmitted along the optimal route.

9. (New) The method of claim 1, wherein determining the optimal route comprises determining an optimal next hop for transmitting data.

10. (New) A first intermediate server, comprising:

means for receiving data associated with a request for content at the first intermediate server, the data transmitted from an end user to the first intermediate server;

means for identifying a first cost of transmission along a default route from the first intermediate server to a content server, the default route determined using one or more existing routing mechanisms;

means for identifying a second cost of transmission along an alternate route from the first intermediate server to the content server, the alternate route including a second intermediate server not in the default route, wherein the second intermediate server is part of an overlay network;

means for determining an optimal route based at least in part on the first cost and the second cost, wherein the first cost and the second cost are determined using network communication performance metrics; and

means for transmitting data associated with the request for content along the optimal route.

11. (New) The first intermediate server of claim 10, wherein network communication performance metrics are obtained periodically.

12. (New) The first intermediate server of claim 11, wherein the cost of transmission is determined using one or more network communication performance metrics selected from the following group: delay, bandwidth, jitter, loss, security.

13. (New) The first intermediate server of claim 10, wherein the alternate route comprises one or more overlay nodes.

14. (New) The first intermediate server of claim 13, wherein the one or more overlay nodes define a virtual topology.

15. (New) An overlay node in a network, comprising:

an interface configured to receive data associated with a request for content at a first intermediate server, the data transmitted from an end user to the first intermediate server;

a processor coupled to the interface, the processor configured to identify a first cost of transmission along a default route from the first intermediate server to a content server and a second cost of transmission along an alternate route from the first intermediate server to the content server, the default route determined using one or more existing routing mechanisms and the alternate route including a second intermediate server not in the default route, wherein the

second intermediate server is part of an overlay network, wherein the processor is further configured to determine an preferred route based at least in part on the first cost and the second cost, wherein the first cost and the second cost are determined using network communication performance metrics.

16. (New) The overlay node of claim 15, wherein the processor is further configured to transmit data associated with the request for content along the preferred route.

17. (New) The overlay node of claim 15, wherein network communication performance metrics are obtained periodically.

18. (New) The overlay node of claim 17, wherein the cost of transmission is determined using one or more network communication performance metrics selected from the following group: delay, bandwidth, jitter, loss, security.

19. (New) The overlay node of claim 15, wherein the alternate route comprises one or more overlay nodes.

20. (New) The overlay node of claim 19, wherein the one or more overlay nodes define a virtual topology.

21. (New) A method for selecting a route in a network, the method comprising:
receiving data associated with a request for content at a first intermediate server, the data coming directly or indirectly from an end user to the first intermediate server;

causing a first cost of transmission along a default route from the first intermediate server to a content server to be identified, the default route being determined using one or more existing routing mechanisms;

causing a second cost of transmission along an alternate route from the first intermediate server to the content server to be identified, the alternate route including a second intermediate server not in the default route, wherein the second intermediate server is part of an overlay network;

causing an optimal route to be determined based at least in part on the first cost and the second cost, wherein the first cost and the second cost are determined using network communication performance metrics; and

causing data associated with the request for content to be transmitted along the optimal route.

22. (New) A network server, comprising:
a mechanism constructed and adapted to receive data associated with a request for content at a first intermediate server, the data transmitted from an end user to the first intermediate server;

- a mechanism constructed and adapted to identify a first cost of transmission along a default route from the first intermediate server to a content server, the default route determined using one or more existing routing mechanisms;
- a mechanism constructed and adapted to identify a second cost of transmission along an alternate route from the first intermediate server to the content server, the alternate route including a second intermediate server not in the default route, wherein the second intermediate server is part of an overlay network;
- a mechanism constructed and adapted to determine an optimal route based at least in part on the first cost and the second cost, wherein the first cost and the second cost are determined using network communication performance metrics; and
- a mechanism constructed and adapted to transmit data associated with the request for content along the optimal route .